

# KIC 007283507

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_{\star}$ ( $R_{\odot}$ )	$T_{\star}$ (K)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007283507-01	OBS	No	1.733601	133.247705	4.6	19.352	8.7	2.9	1.78	6647	0.45	5698.29

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007283507-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

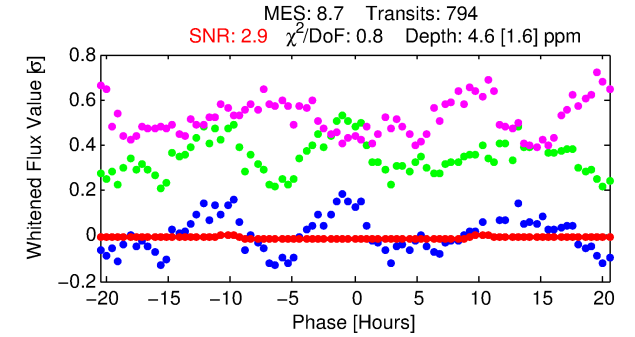
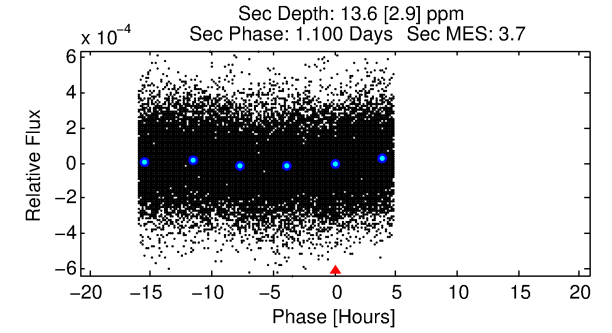
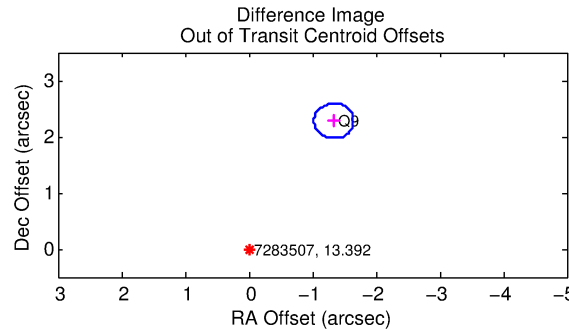
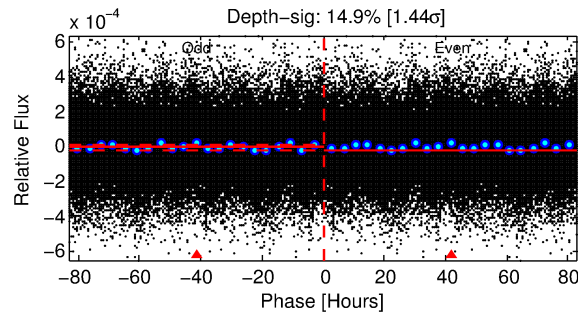
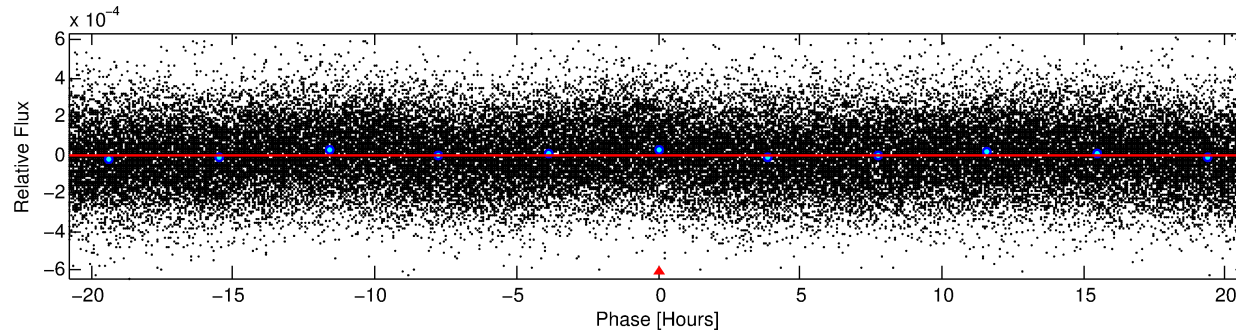
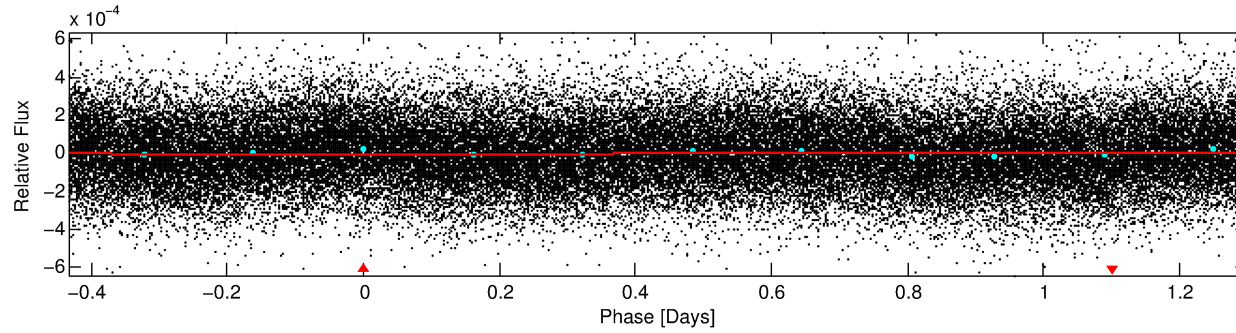
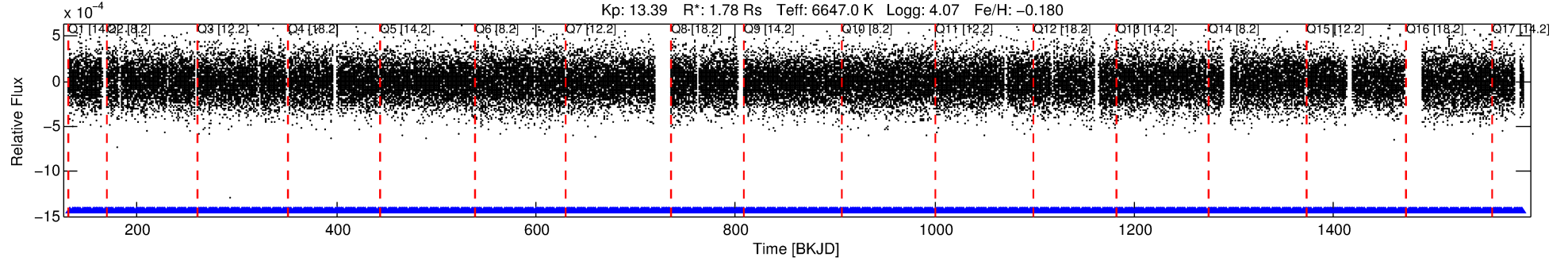
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007283507-01

No Significant Match Found

# DV One-Page Summary

KIC: 7283507 Candidate: 1 of 1 Period: 1.734 d



## DV Fit Results:

Period = 1.73360 [0.00015] d  
Epoch = 133.2477 [0.0489] BKJD  
Rp/R\* = 0.0023 [0.0012]  
a/R\* = 1.00 [0.02]  
b = 0.91 [0.57]  
Seff = 5698.29 [1871.59]  
Teq = 2215 [182] K  
Rp = 0.45 [0.25] Re  
a = 0.0312 [0.0064] AU  
Ag = 35.65 [38.21] [0.91 $\sigma$ ]  
Teffp = 8370 [2140] K [2.87 $\sigma$ ]

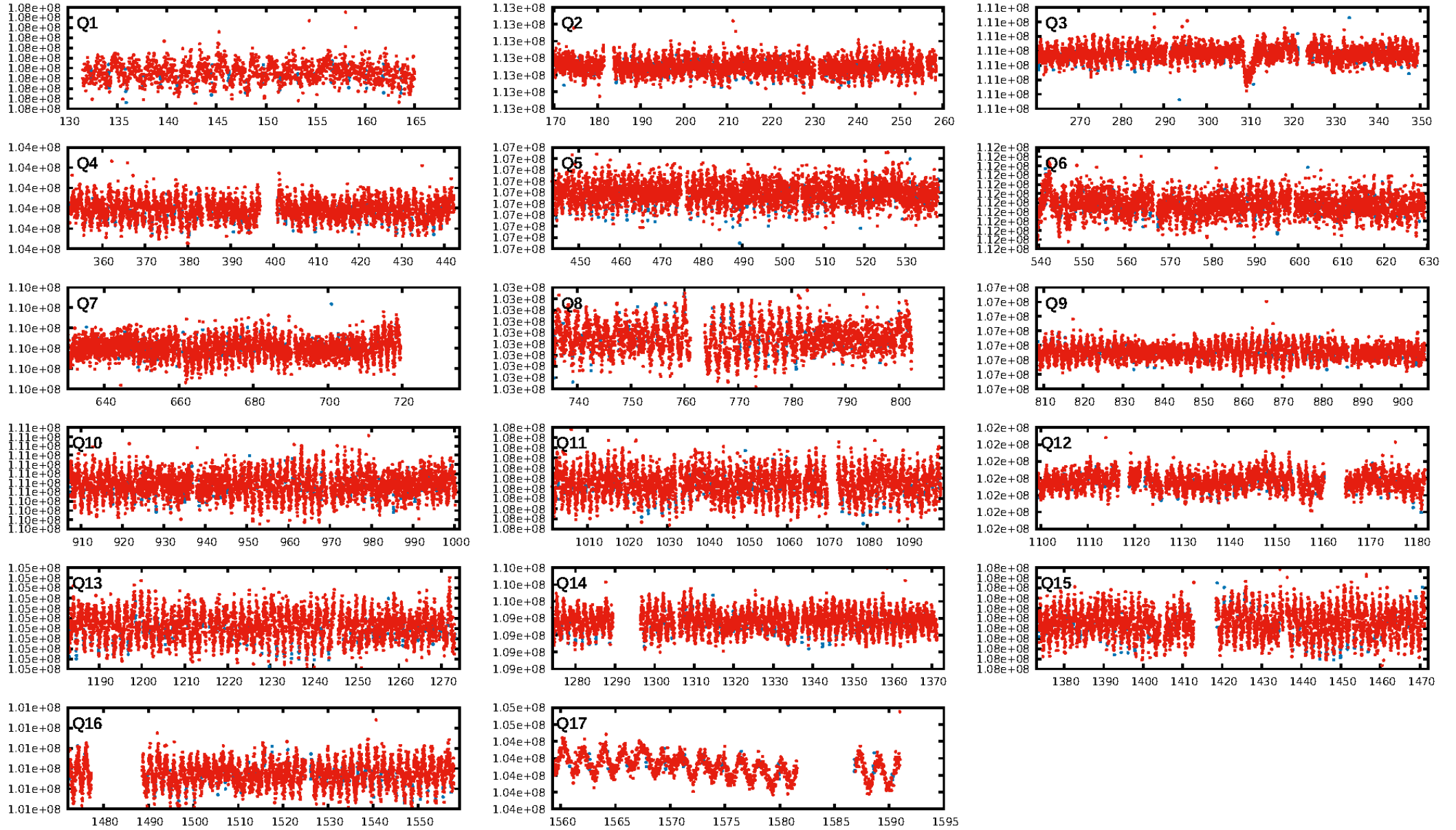
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [758/758]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 2.641 arcsec [25.44 $\sigma$ ]  
KicOffset-rm: 2.615 arcsec [25.22 $\sigma$ ]  
OotOffset-st: 0/0/0/1 [1]  
KicOffset-st: 0/0/0/1 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [17/17]

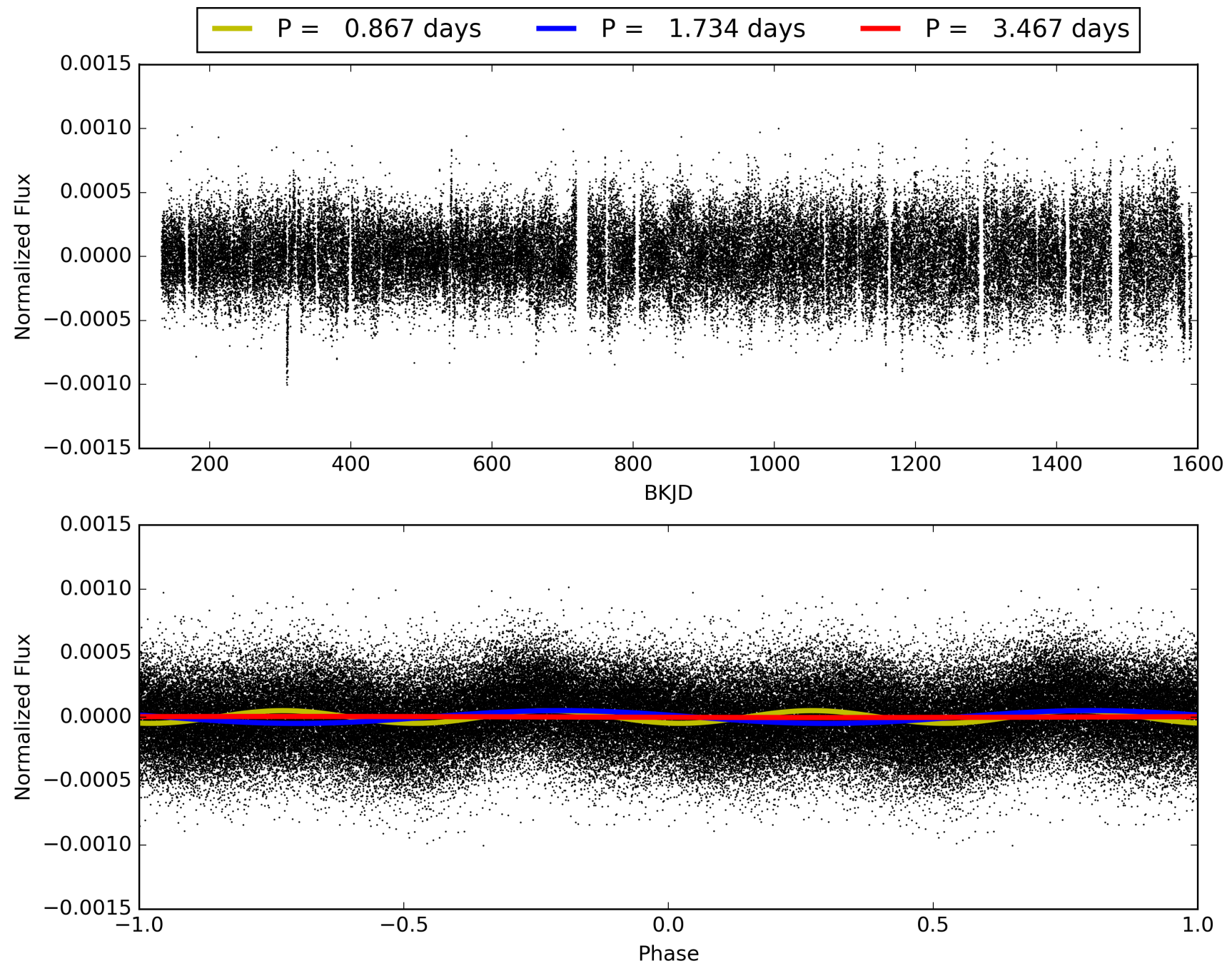
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:51:40 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 007283507-01, PDC Light Curves

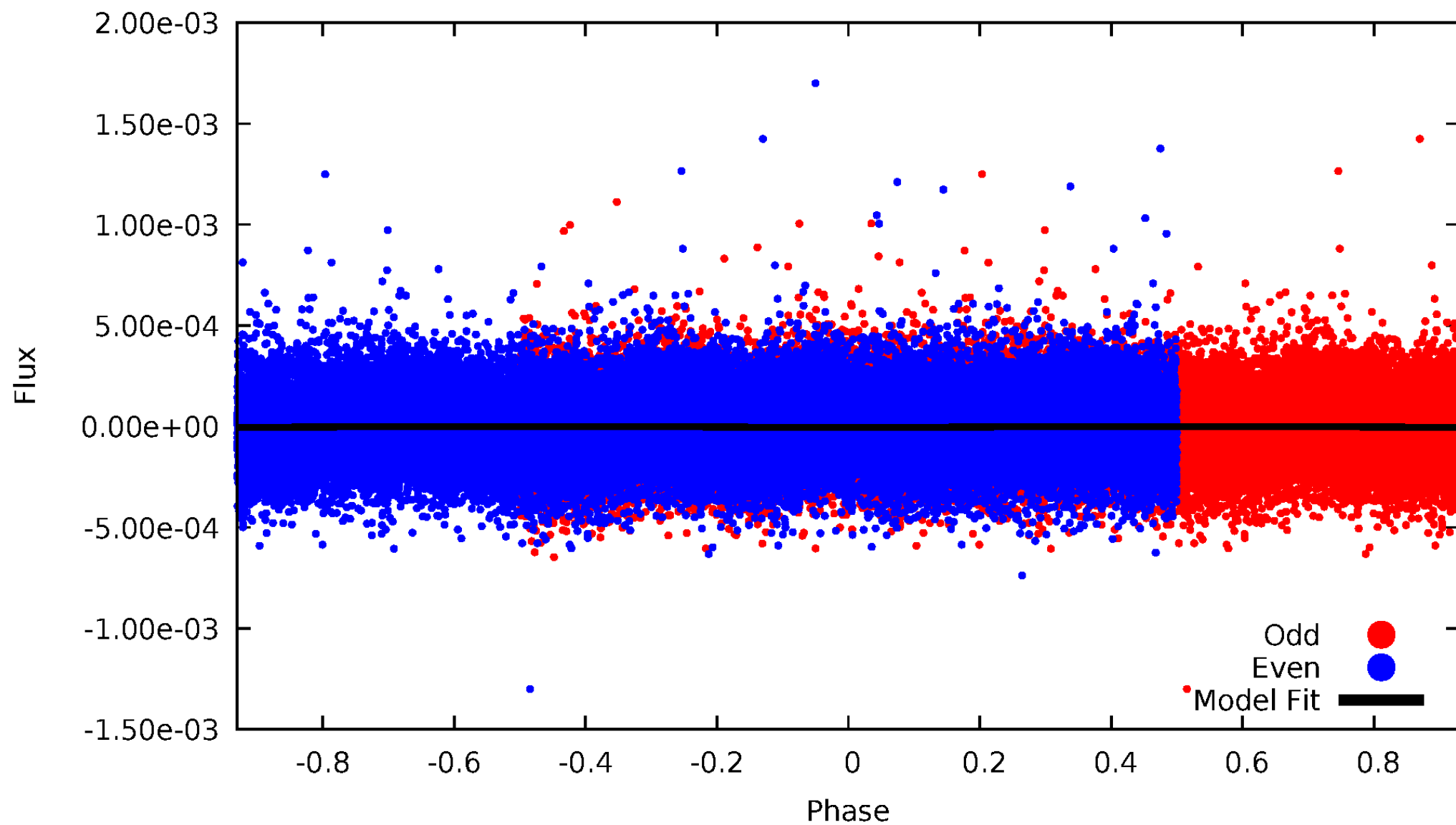


TCE 007283507-01



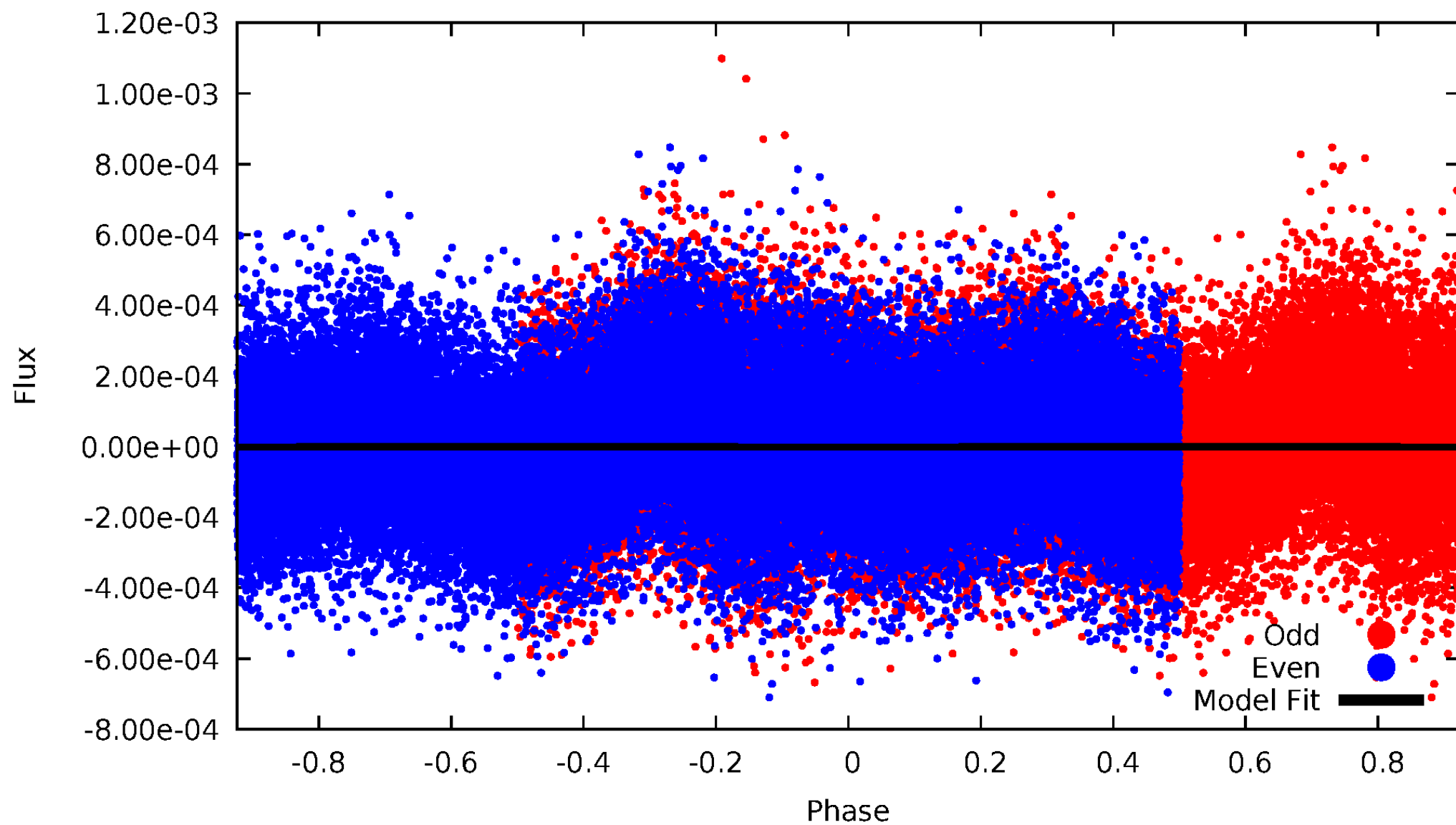
# DV Odd/Even

TCE 007283507-01



# ALT Odd/Even

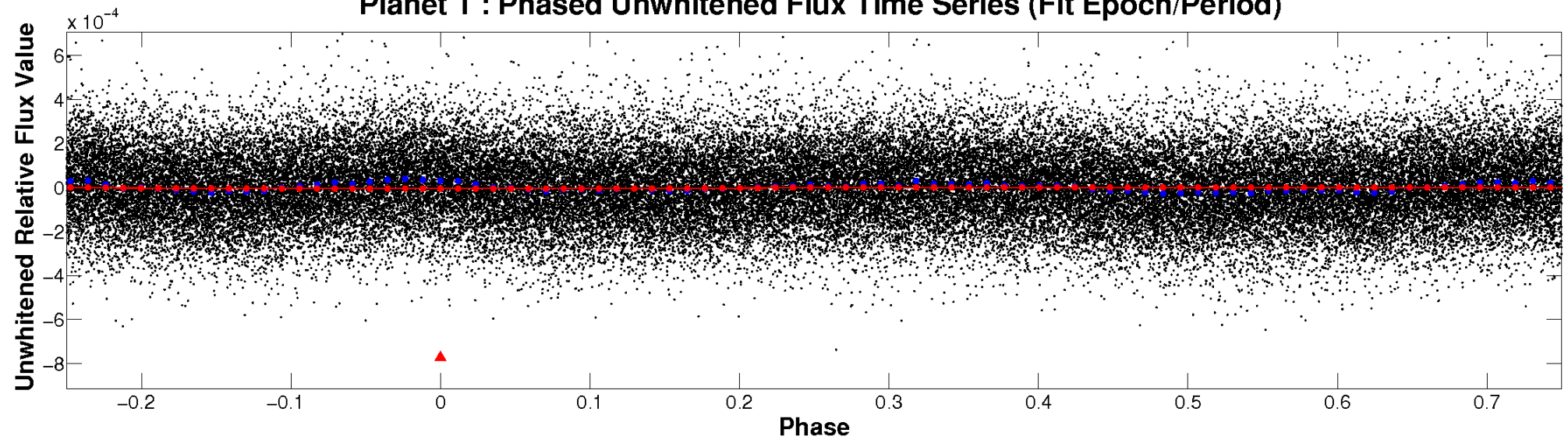
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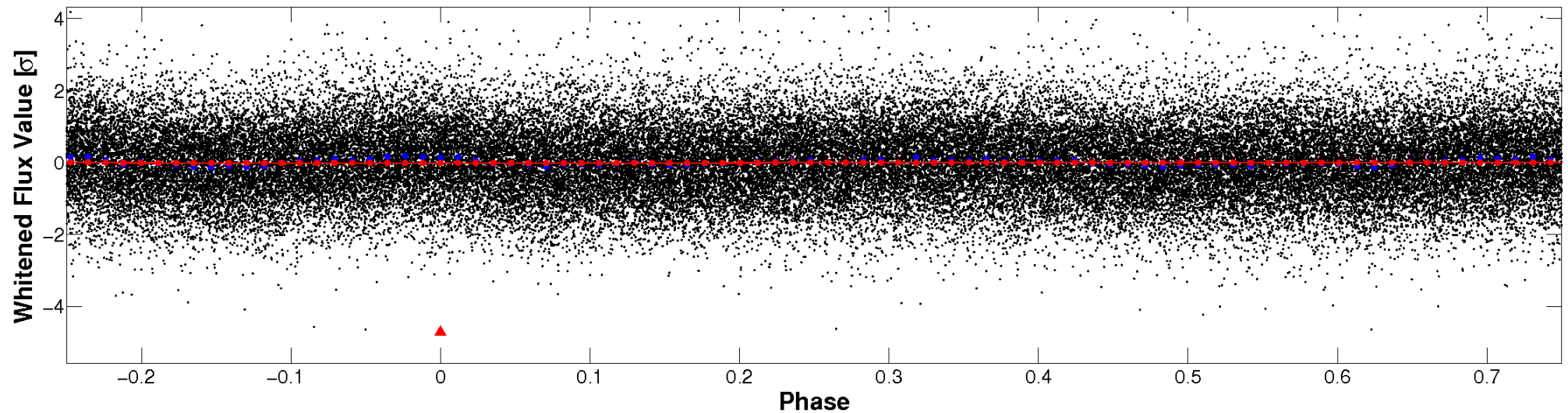


# Non-Whitened Vs. Whitened Light Curve

**Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)**

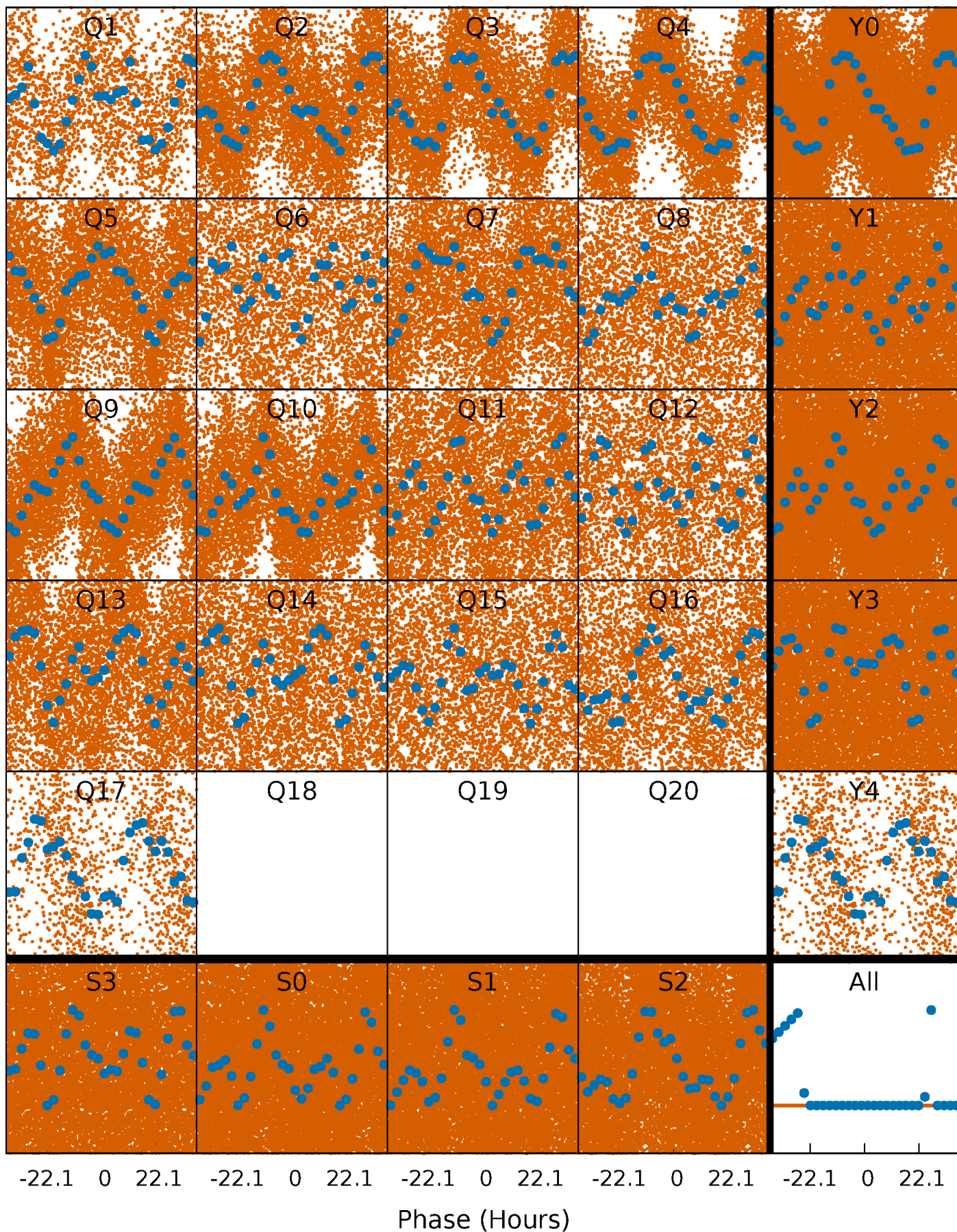


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

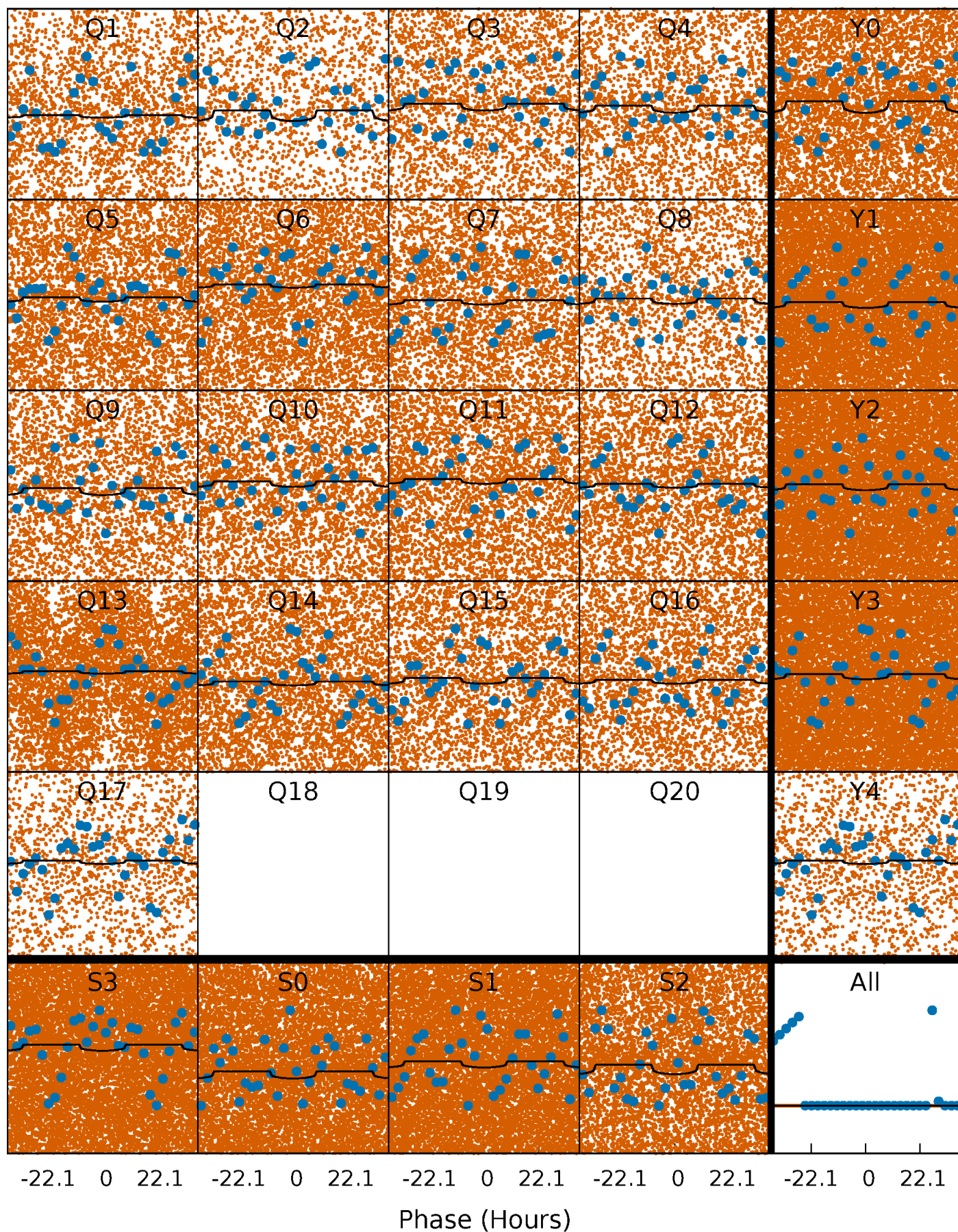
TCE 007283507-01 P= 1.733601 Days  $T_0=133.247705$  (BKJD)





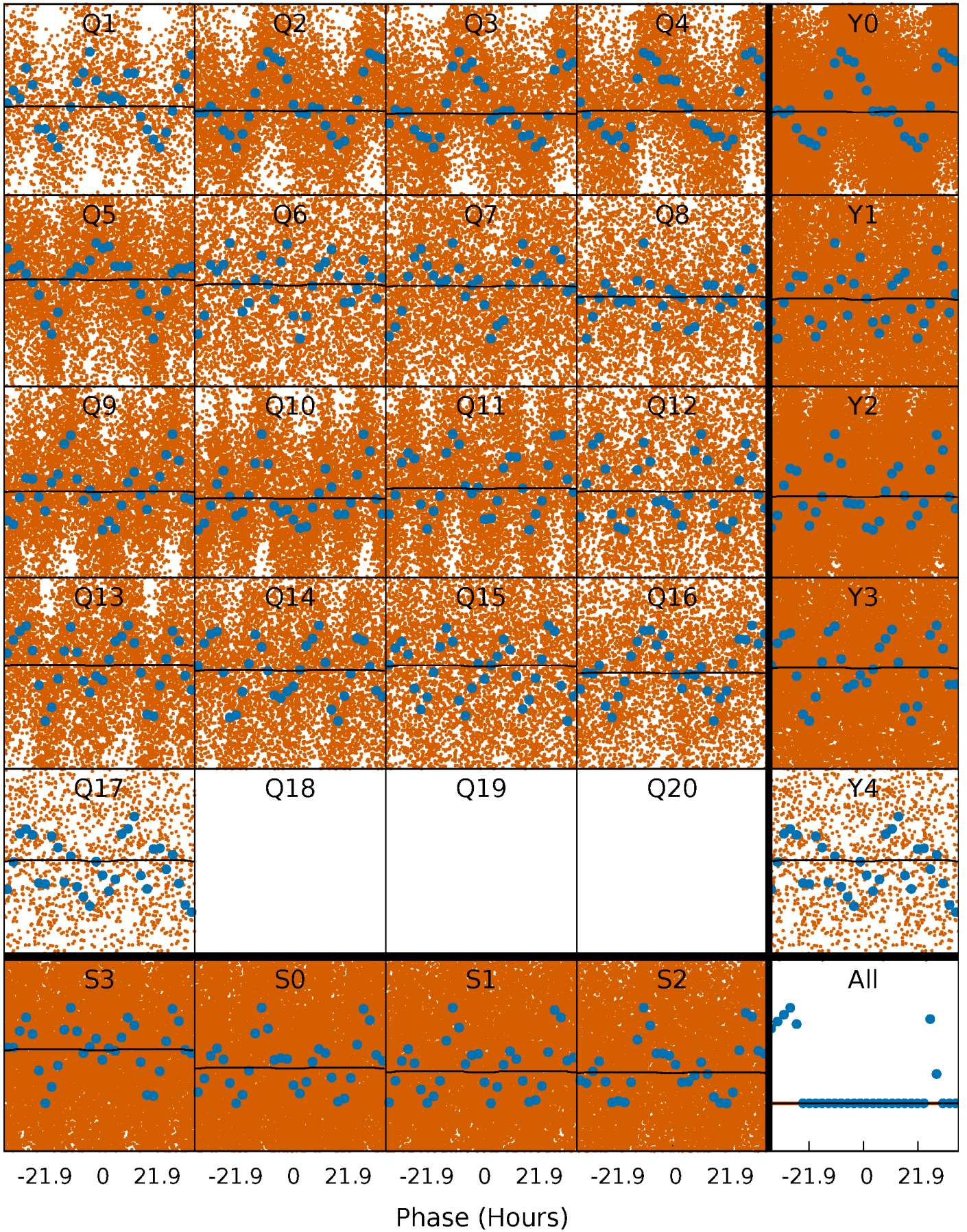
# DV Quarter-Phased Transit Curves

TCE 007283507-01 P= 1.733601 Days  $T_0=133.247705$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 007283507-01 P= 1.733794 Days  $T_0=133.183134$  (BKJD)

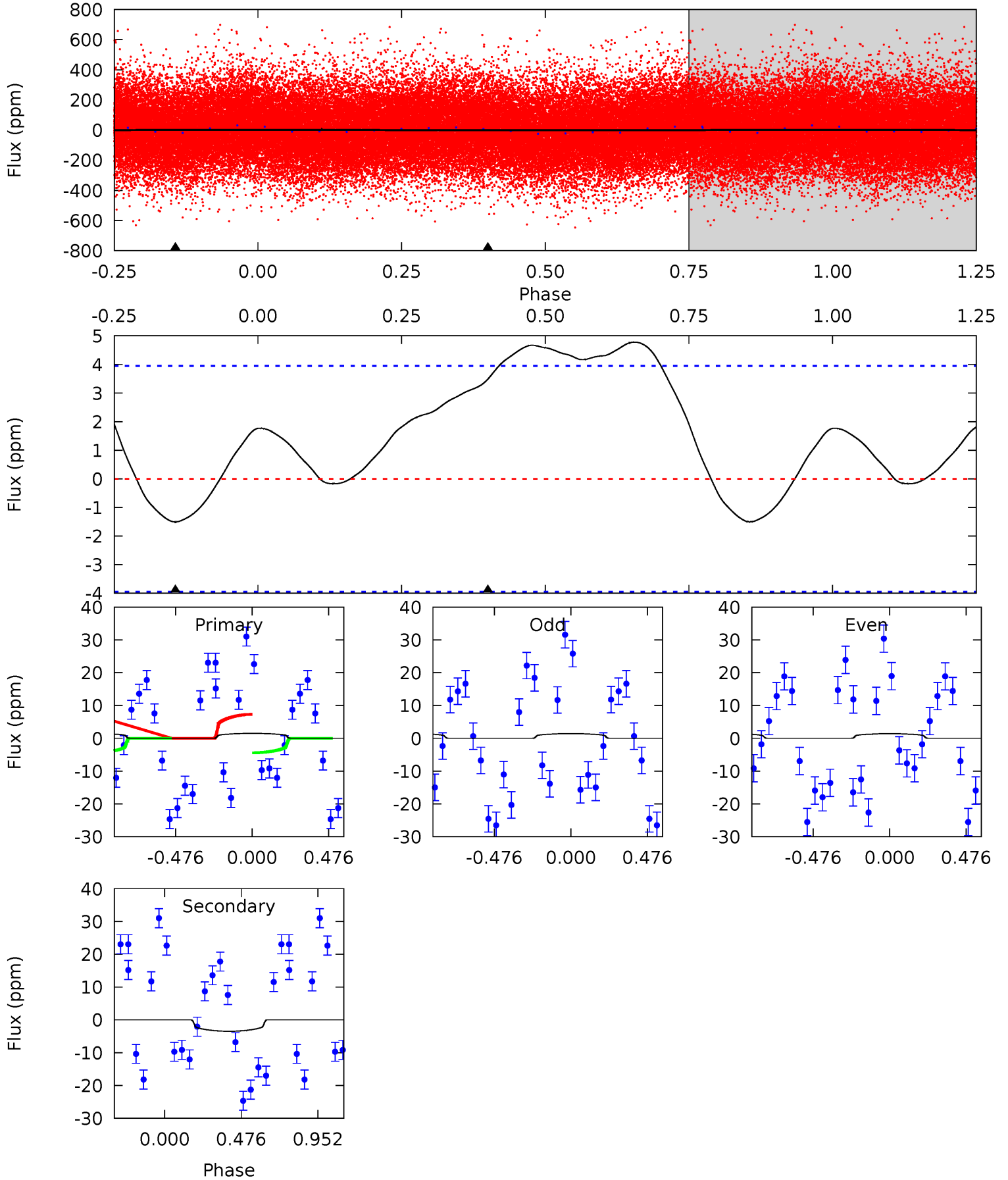




# DV Model-Shift Uniqueness Test

007283507-01, P = 1.733601 Days, E = 129.780503 Days

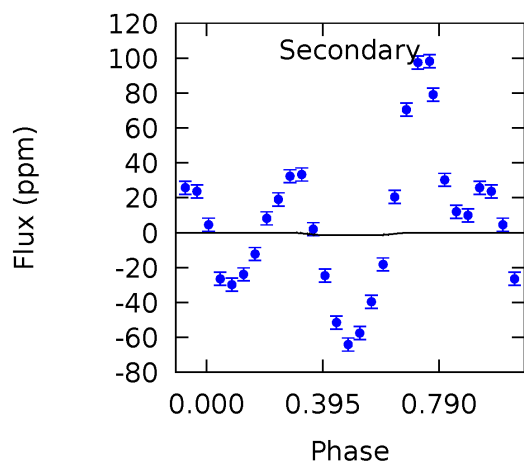
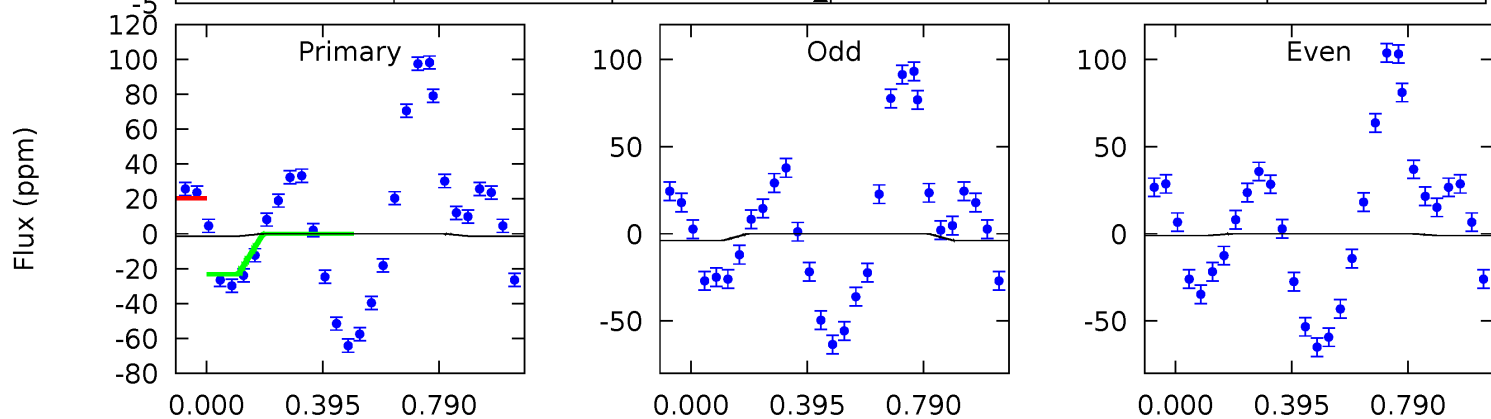
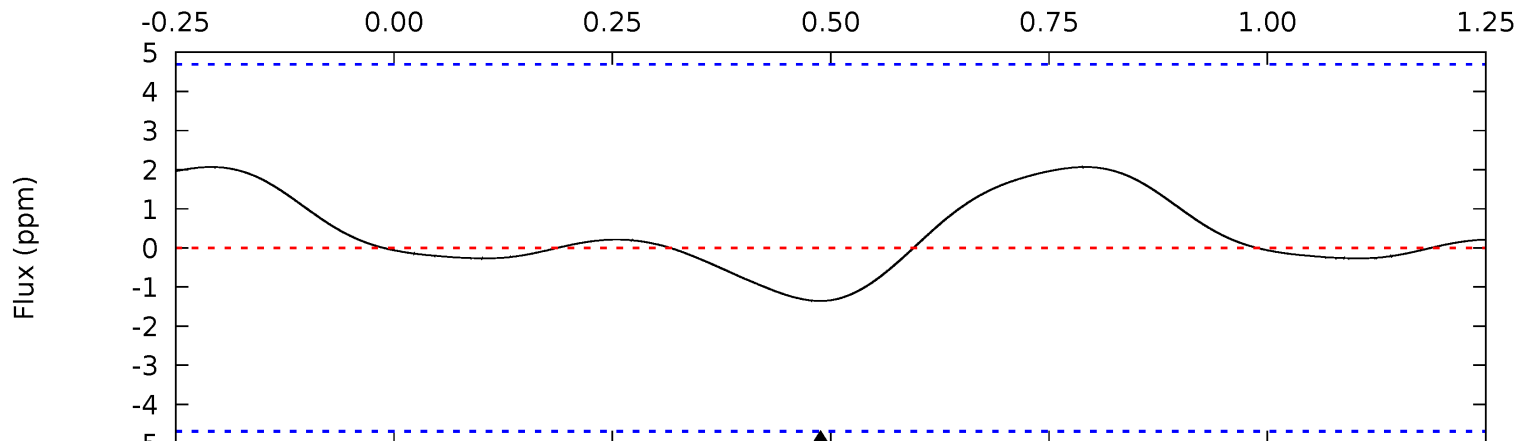
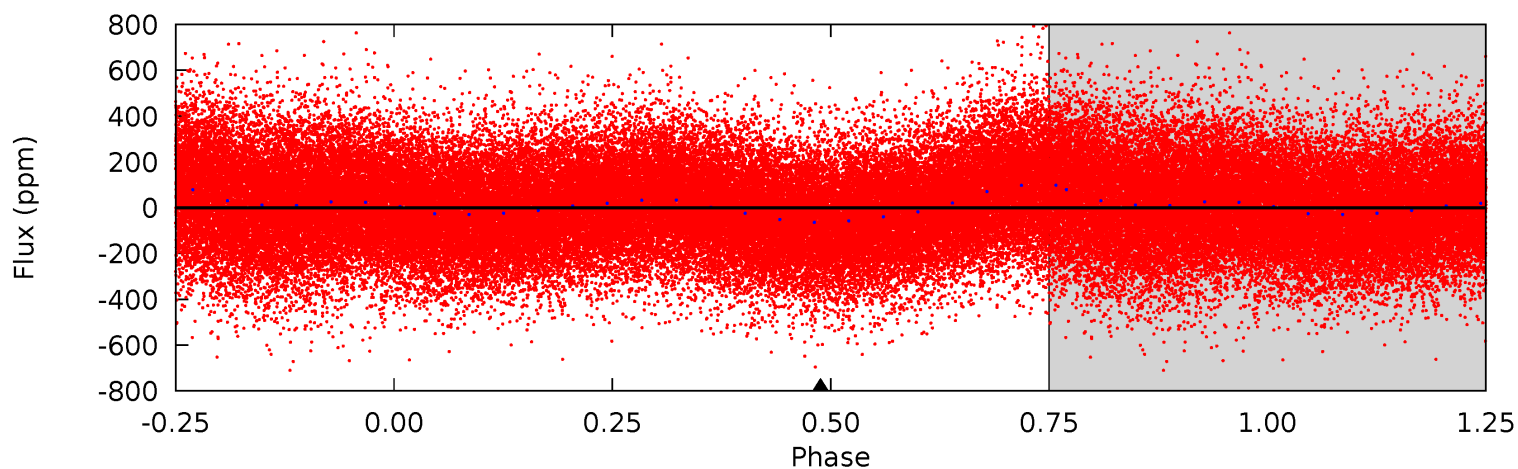
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.61	-3.73	0	0	4.23	0.71	1.37	1.61	1.61	-3.73	-3.73	0.01	1.57	0.76	1.55



# Alt Model-Shift Uniqueness Test

007283507-01, P = 1.733794 Days, E = 131.449340 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.23	1.23	0	0	4.27	0.85	0.41	1.23	1.23	1.23	1.23	1.33	-1.96	0.60	1.32





### Stellar Parameters For KIC 007283507

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6647^{+79}_{-79}$	$4.066^{+0.189}_{-0.102}$	$-0.180^{+0.200}_{-0.150}$	$1.780^{+0.284}_{-0.391}$	$1.351^{+0.105}_{-0.132}$	$0.338^{+0.304}_{-0.118}$
	+1%/-1%	+5%/-3%	+111%/-83%	+16%/-22%	+8%/-10%	+90%/-35%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 007283507-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$3 \pm 1$	$0.44^{+0.22}_{-0.20}$	$3081^{+142}_{-184}$	$-5937^{+1011}_{-2155}$	$-8.985^{+5.096}_{-22.799}$
Alt.	$-1 \pm 1$	$0.27^{+0.21}_{-0.17}$	$3081^{+148}_{-192}$	$5671^{+4795}_{-2014}$	$8.045^{+53.630}_{-6.965}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{\text{obs}}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$

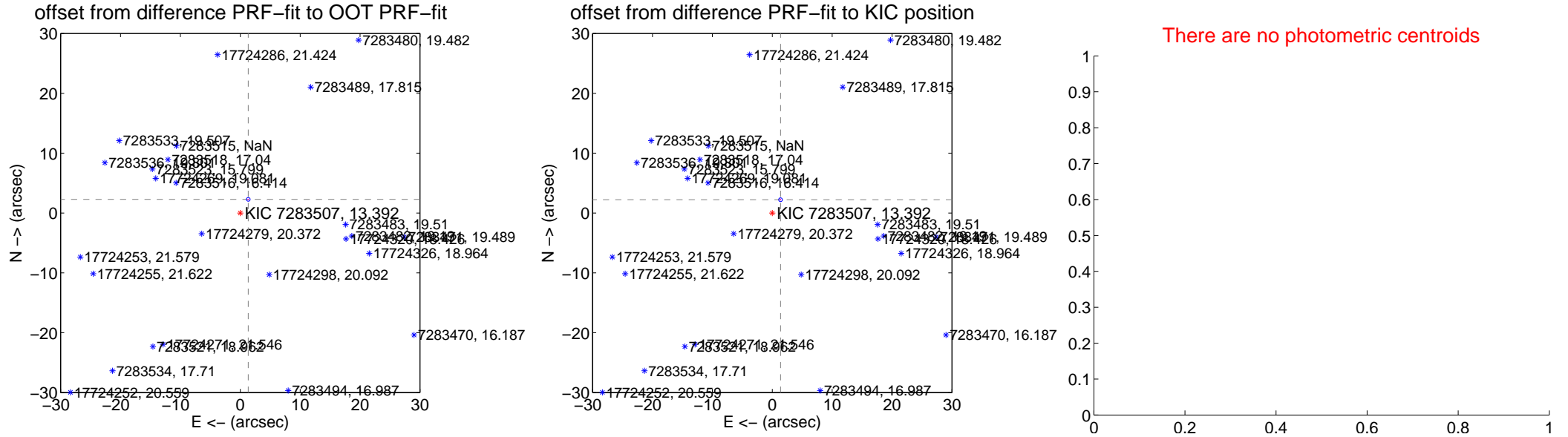
## DV Centroid Data

Supplemental centroid analysis for 007283507-01. Kepler magnitude: 13.39. Transit SNR 2.93

There are 0 quarters with good PRF difference image offsets

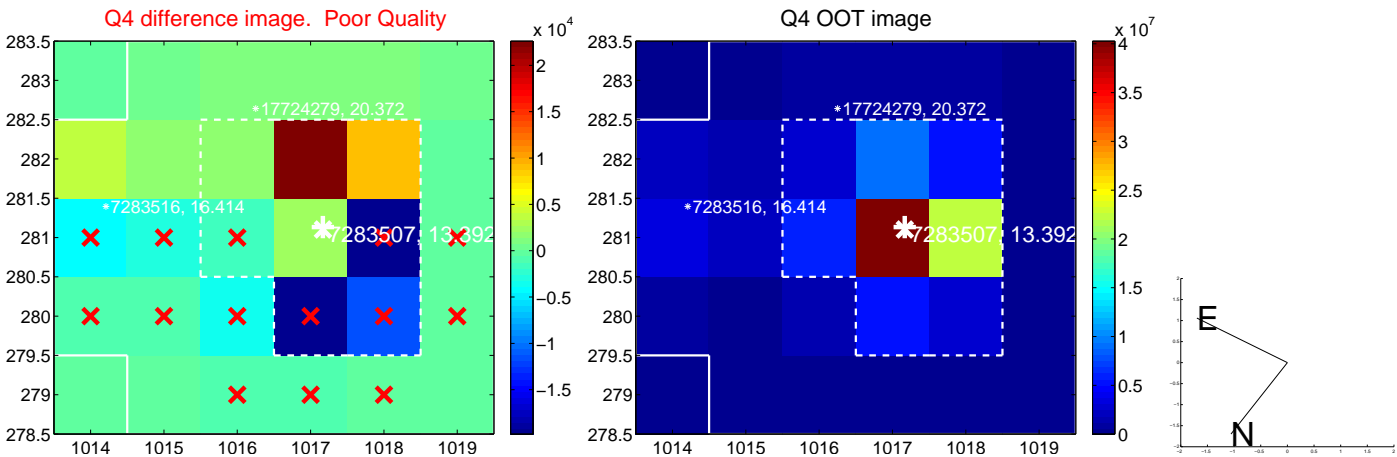
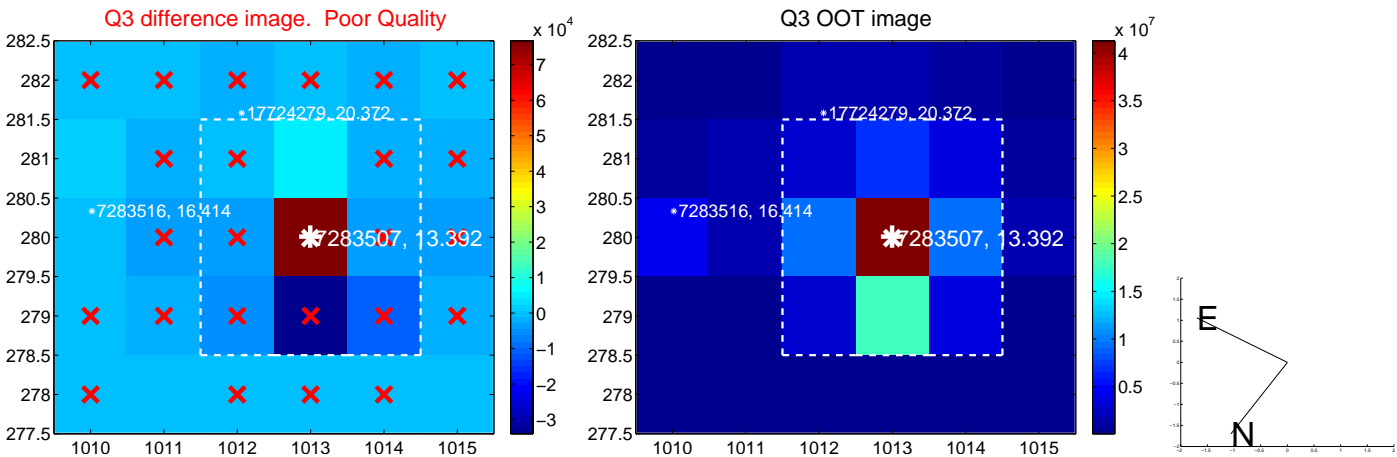
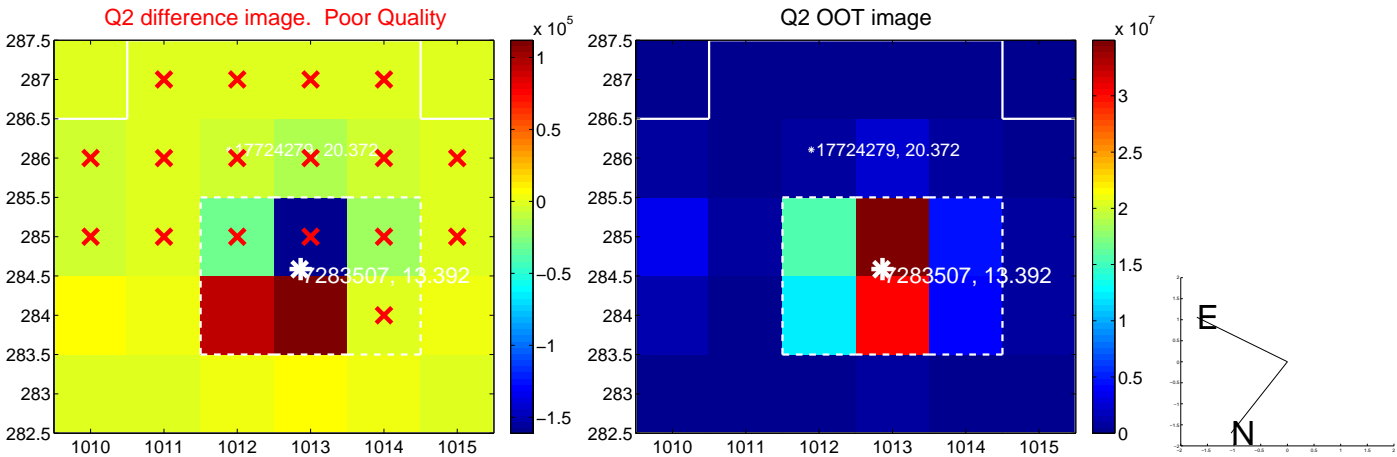
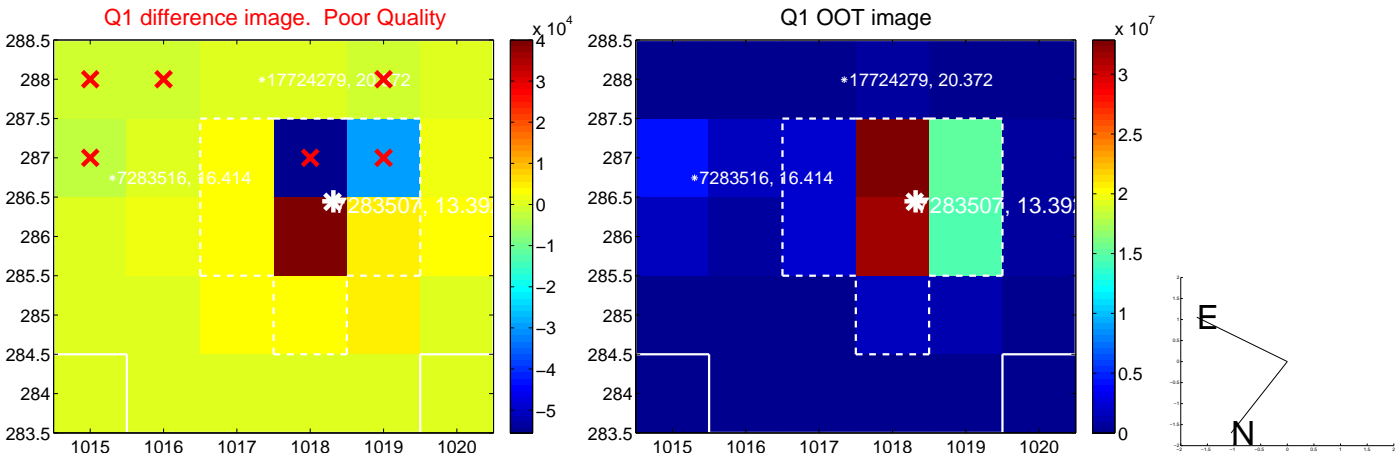
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.641 \pm 0.104$	25.44	$-1.334 \pm 0.099$	$2.279 \pm 0.106$
PRF-fit source offset from KIC position	$2.615 \pm 0.104$	25.22	$-1.381 \pm 0.099$	$2.220 \pm 0.106$
photometric centroid source offset	—	—	—	—

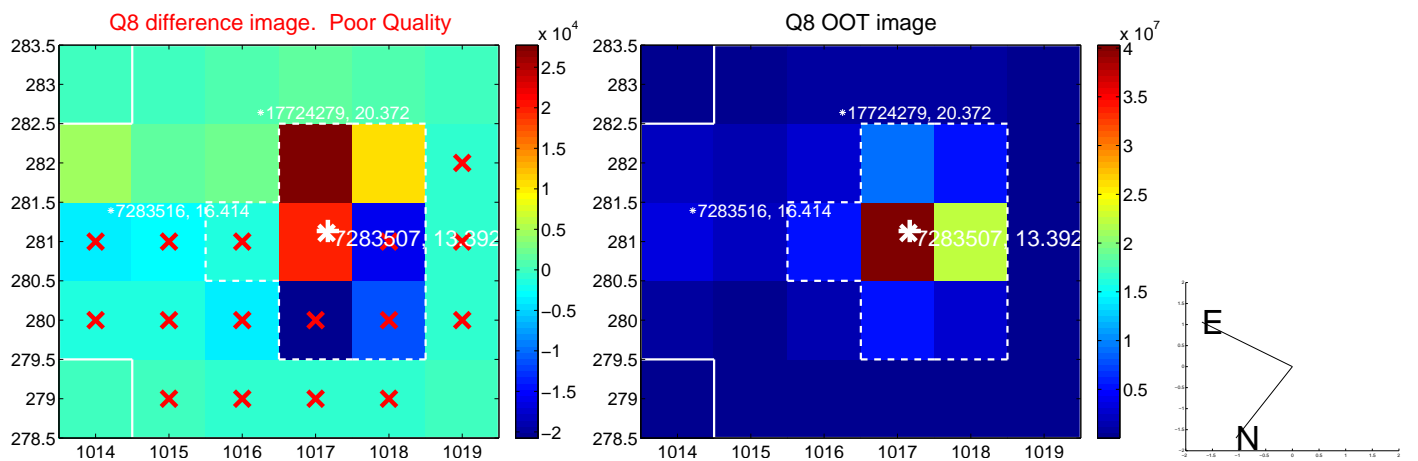
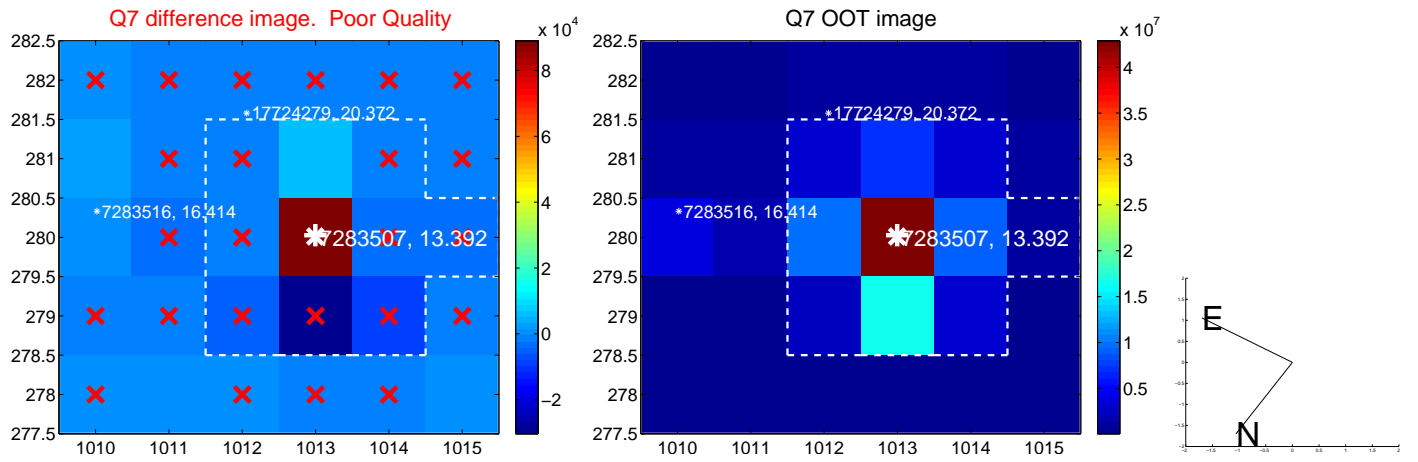
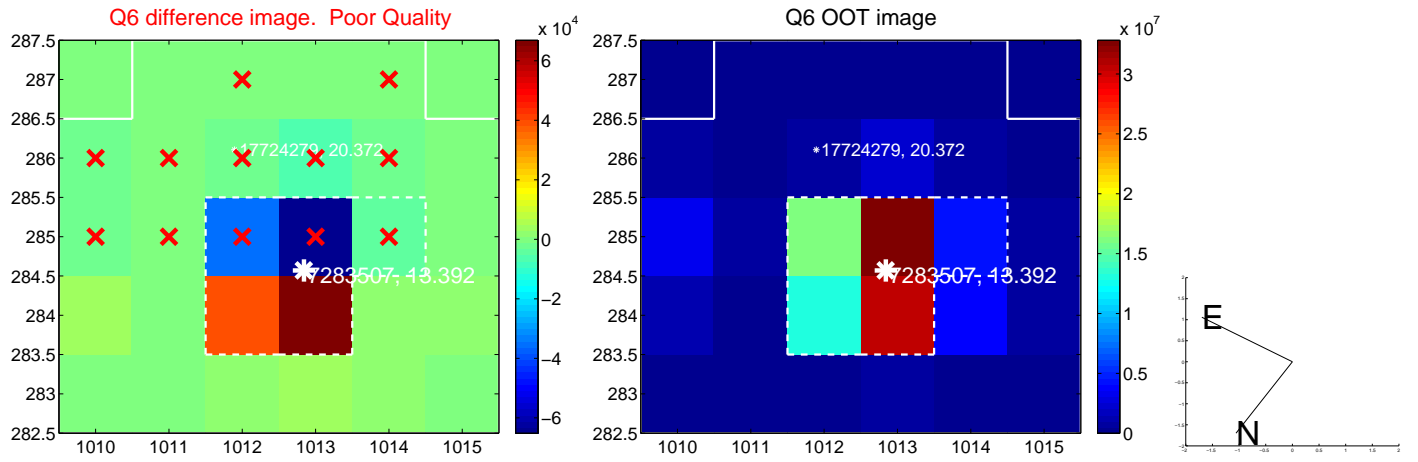
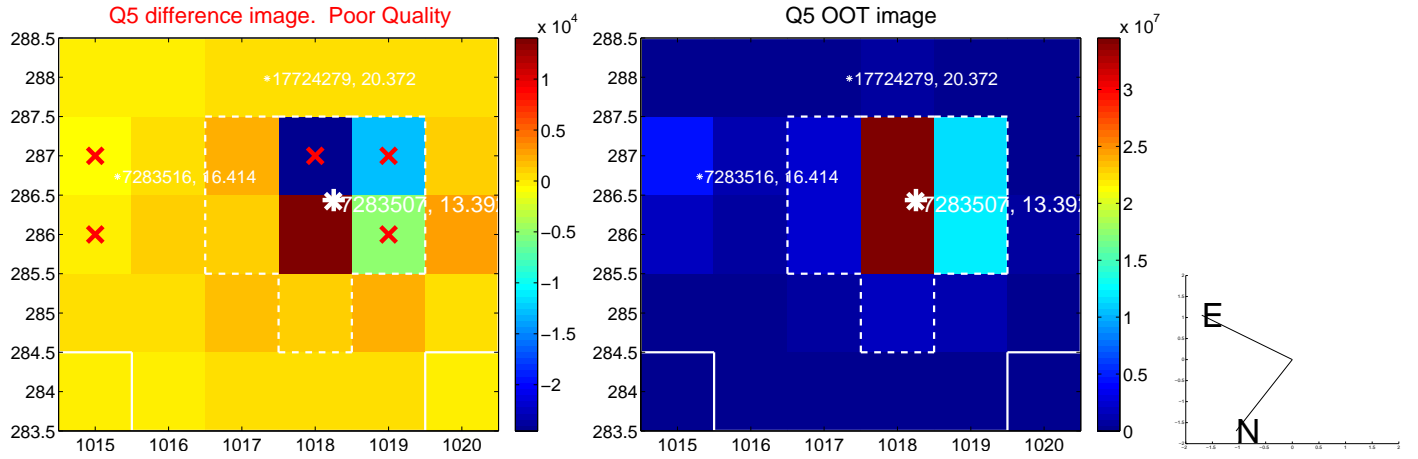


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

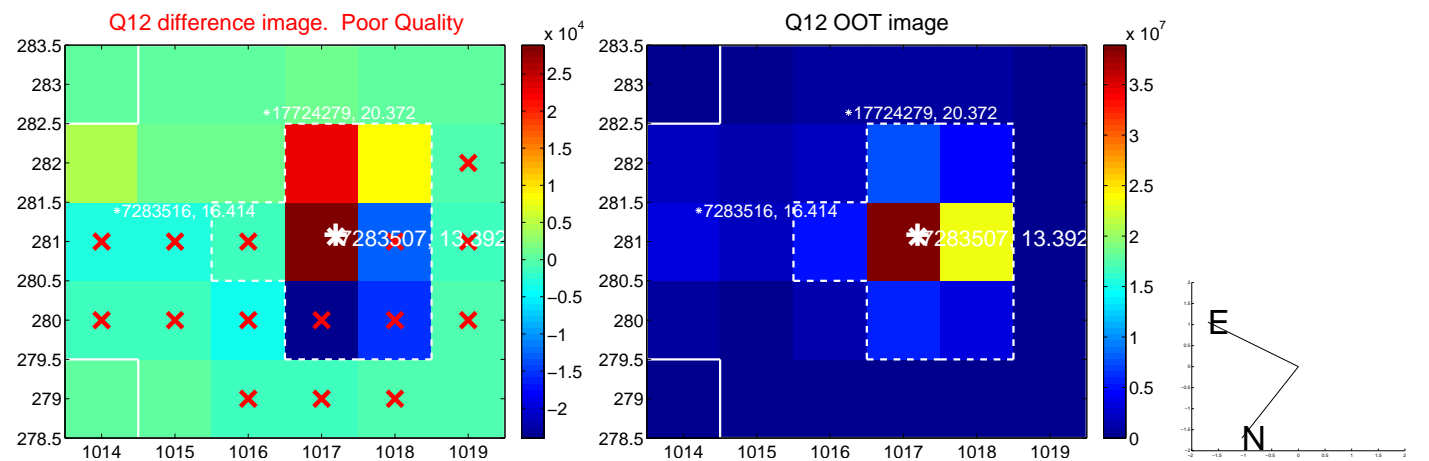
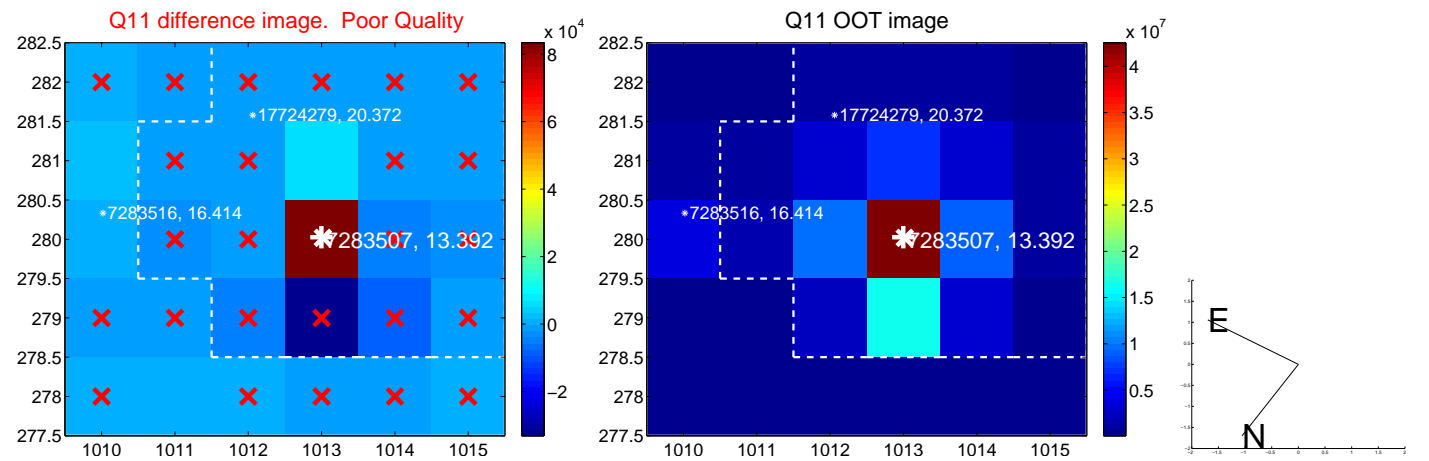
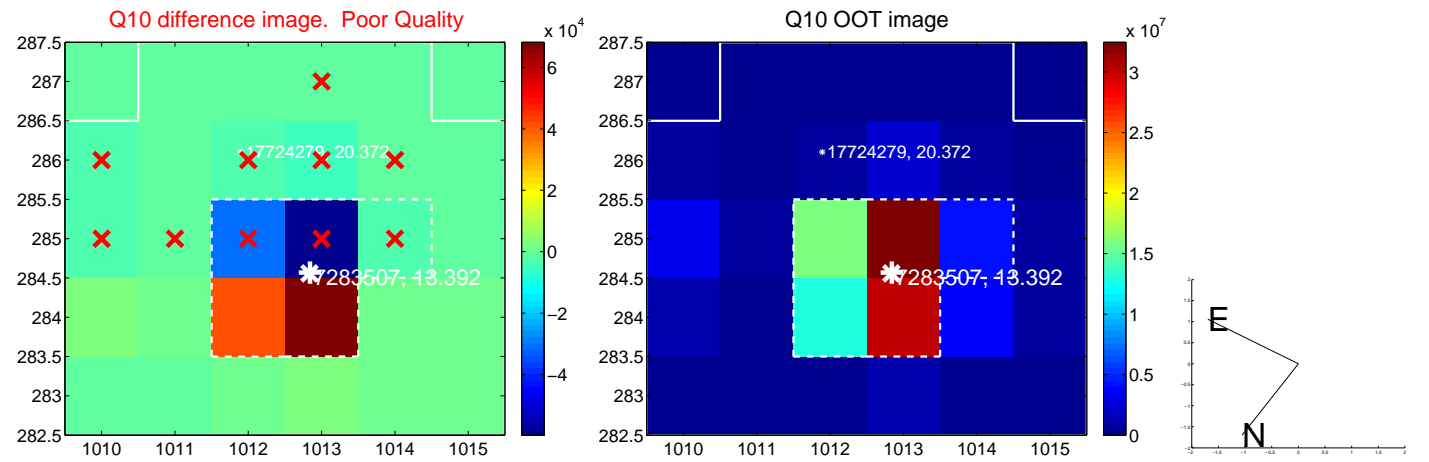
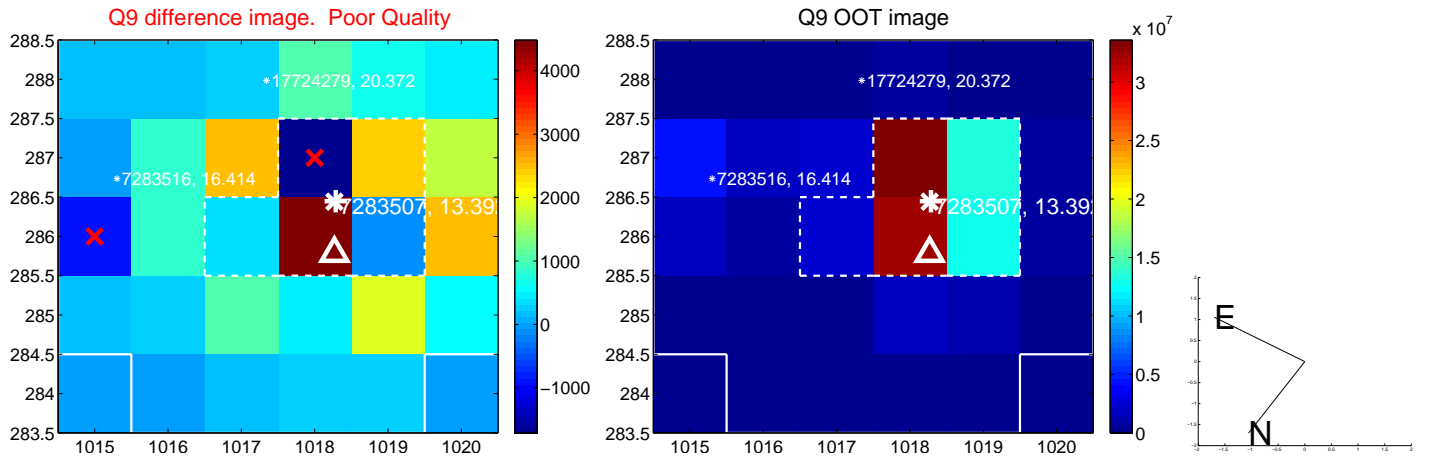


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

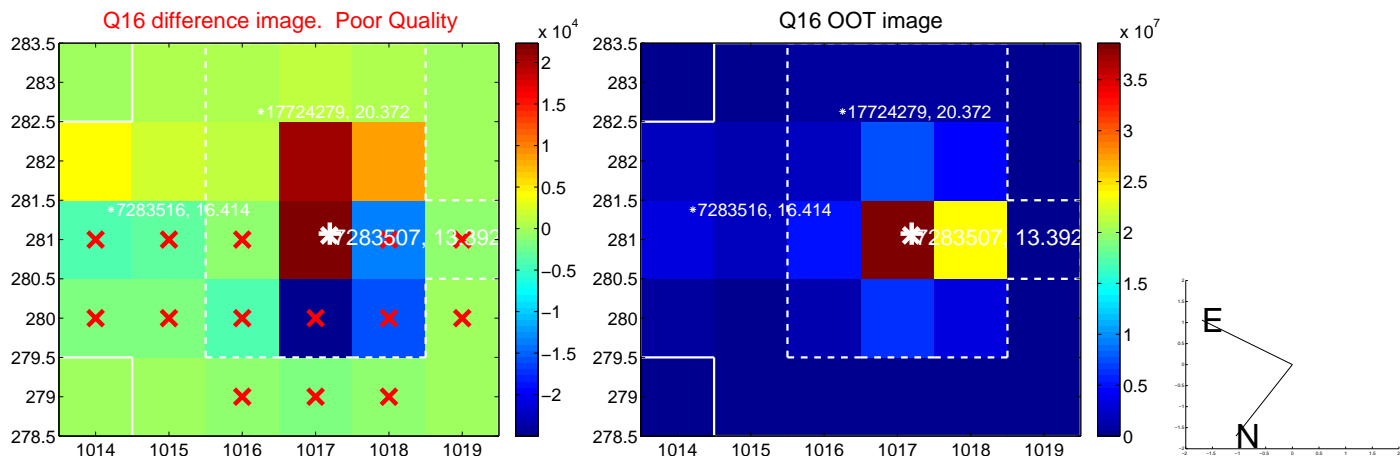
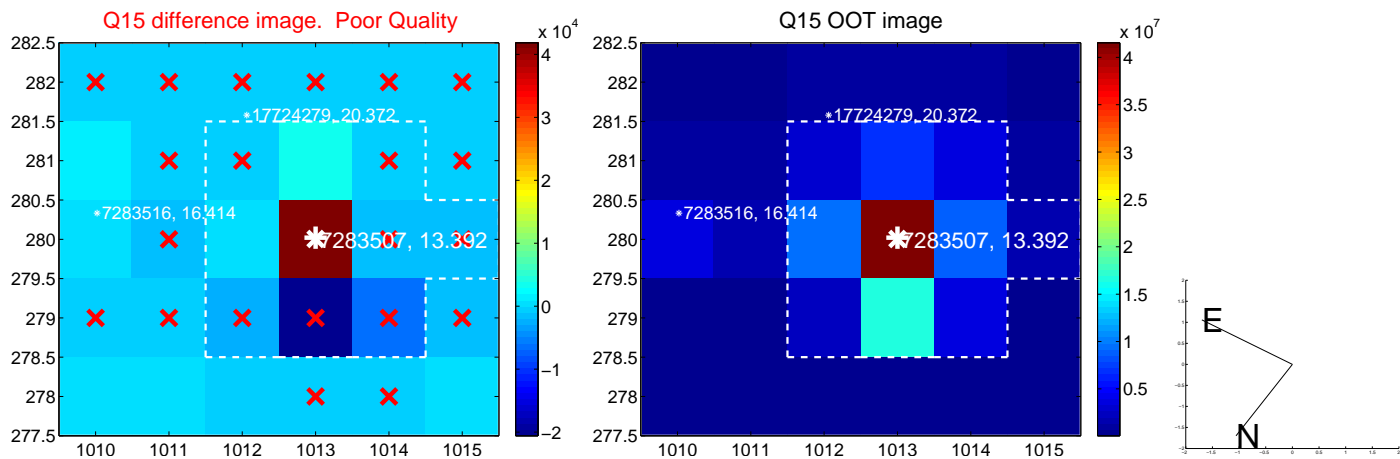
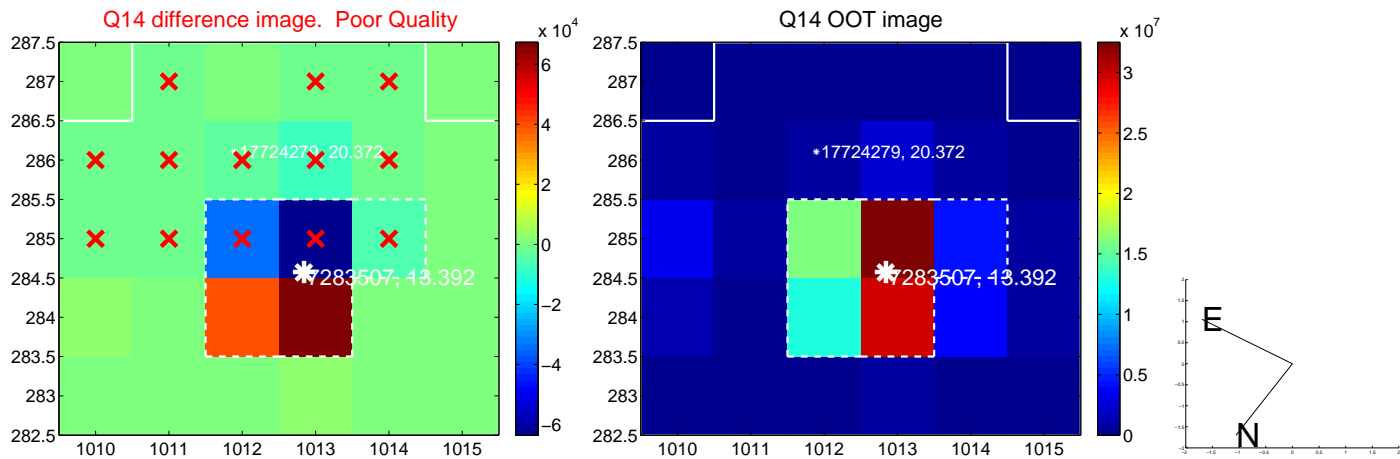
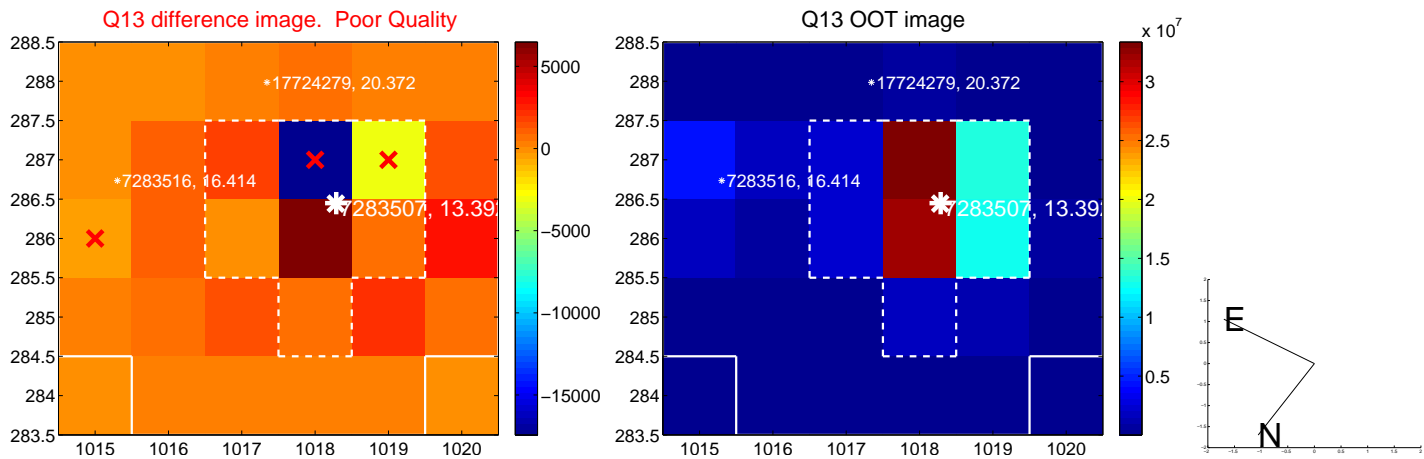




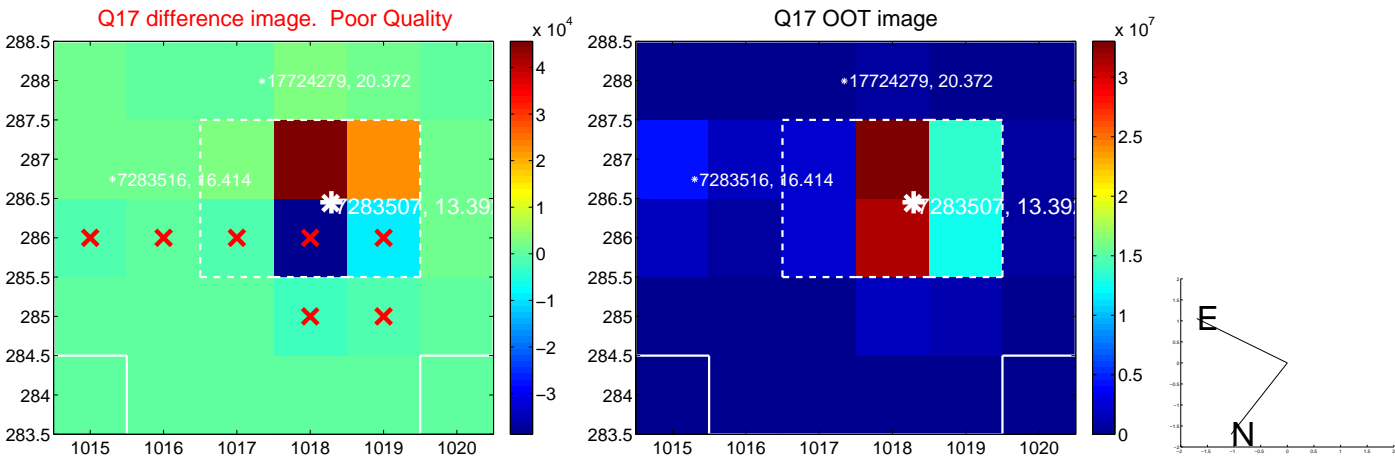
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

